ALPHA VAC

阿尔法真空

Product Catalogue

Suction cups, foam grippers, robotic gripsters, vacuum generators and tube lifters for every automated and hand guided pick.

3,609 order codes · 26 families · 6 categories

INDUSTRIAL VACUUM GRIPPERS AND GRIPSTERS

The range at a glance

PLANO

Flat cup for flat, rigid, dry surfaces

GRIDLINE

Cleated flat cup, resists deformation under load, vents trapped oil

STRIDE

1.5-fold bellows, modest height compensation, fast cycle

VAULT

2.5-fold bellows, general purpose stroke for carton and bag handling

REACH

3.5-fold bellows, maximum stroke for stepped and uneven picks

BASIN

Deep round cup for strongly curved and cylindrical parts

SPAN

Oval flat cup, maximum area on narrow profiles

SPANFLEX

Oval bellows, narrow footprint with height compensation

WISP

Micro precision cup for electronics and thin film

EMBER

High-temperature flat cup for hot glass and formed sheet

DRIFT

Foam area pad, grips mixed-height and porous loads without a seal

MESA

Rectangular flat pad, maximum sealed area on flat panels

PLUME

Soft multi-fold bellows, gentle grip on bags, film and pouches

MEADOW

Large sealed area gripper, one pad grips whole layers

GUST

Compact single-stage venturi, fast, simple, inline

CYCLONE

Multi-stage venturi, high suction flow for big or leaky loads

VORTEX

Valve-integrated generator, vacuum, blow-off and control in one

HOIST

Ergonomic vacuum tube lifter, one operator, whole-day lifting

PIVOT

Ball-joint swivel mount, cups self-align to angled faces

STALK

Spring compensator, soft touchdown, even load sharing

CLUSTER

Multi-cup array, grip a whole part in one plenum

FILTRA

Inline vacuum filter, keeps dust out of generators and valves

GATE

Vacuum check valve, holds grip if supply drops

SENSA

Digital vacuum switch, verify grip before every move

FLEXOR

Standalone spring compensator, add stroke to any cup mount

LINK

Thread adapters, connect any cup to any port

01

Suction Cups & Pads

The heart of any vacuum system is the cup that touches the part. Alpha Vac suction cups and gripsters cover every common pick: flat panels, curved bodywork, oily press blanks, bagged goods and delicate electronics. Every gripster shape is moulded in a choice of seven elastomers, so the same gripper can run a food line, a press shop or a clean room.

PLANO

GRIDLINE

STRIDE

VAULT

REACH

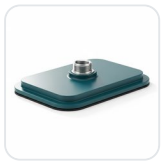
BASIN

SPAN

SPANFLEX

WISP

EMBER



MESA

PLUME

PLANO PLN

FLAT CUP FOR FLAT, RIGID, DRY SURFACES

The flat, low profile workhorse of the range. When the surface is flat, rigid and dry, the PLANO gripster gives the largest sealed area for its diameter and the fastest cycle, the default gripper for sheet metal, glass and board.

APPLICATIONS

flat sheet metal, glass panels, rigid board, flat packaging

0 to 451	4 to 150	-50 to 200	50 to 60	6
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Graphite ESD

Bone

Amber

Deep Teal

Slate

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	No
Nitrile Antistatic	Graphite ESD	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	**Yes**
Silicone	Bone	50 Shore A	-50 to 200 °C -58 to 392 °F	1.15 g/cm³	**Yes**	No	**Yes**	No
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	**Yes**	**Yes**	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	**Yes**	**Yes**	No	No
EPDM	Slate	60 Shore A	-40 to 130 °C -40 to 266 °F	1.15 g/cm³	No	No	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
4 mm / 0.157 in	0.9 mm / 0.035 in	0 mm / 0.0 in	0.0 ml / 0.0 in³	**0 N / 0 lbf**
6 mm / 0.236 in	1.3 mm / 0.051 in	0 mm / 0.0 in	0.01 ml / 0.001 in³	**1 N / 0 lbf**
8 mm / 0.315 in	1.8 mm / 0.071 in	0 mm / 0.0 in	0.01 ml / 0.001 in³	**1 N / 0 lbf**

Cup size	Height	Stroke	Internal volume	Holding force
10 mm / 0.394 in	2.2 mm / 0.087 in	0 mm / 0.0 in	0.03 ml / 0.002 in³	**2 N / 0 lbf**
15 mm / 0.591 in	3.3 mm / 0.13 in	0 mm / 0.0 in	0.09 ml / 0.005 in³	**4 N / 1 lbf**
20 mm / 0.787 in	4.4 mm / 0.173 in	0 mm / 0.0 in	0.21 ml / 0.013 in³	**8 N / 2 lbf**
25 mm / 0.984 in	5.5 mm / 0.217 in	0 mm / 0.0 in	0.4 ml / 0.024 in³	**12 N / 3 lbf**
30 mm / 1.181 in	6.6 mm / 0.26 in	0 mm / 0.0 in	0.7 ml / 0.043 in³	**18 N / 4 lbf**
40 mm / 1.575 in	8.8 mm / 0.346 in	0 mm / 0.0 in	1.66 ml / 0.101 in³	**32 N / 7 lbf**
50 mm / 1.969 in	11.0 mm / 0.433 in	0 mm / 0.0 in	3.24 ml / 0.198 in³	**50 N / 11 lbf**
60 mm / 2.362 in	13.2 mm / 0.52 in	0 mm / 0.0 in	5.6 ml / 0.342 in³	**72 N / 16 lbf**
75 mm / 2.953 in	16.5 mm / 0.65 in	0 mm / 0.0 in	10.93 ml / 0.667 in³	**113 N / 25 lbf**
88 mm / 3.465 in	19.4 mm / 0.764 in	0 mm / 0.0 in	17.7 ml / 1.08 in³	**155 N / 35 lbf**
110 mm / 4.331 in	24.2 mm / 0.953 in	0 mm / 0.0 in	34.5 ml / 2.105 in³	**242 N / 54 lbf**
150 mm / 5.906 in	33.0 mm / 1.299 in	0 mm / 0.0 in	87.47 ml / 5.338 in³	**451 N / 101 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/2 (BSPP) male, G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-PLN-[size]-[compound]-[connection], for example AV-PLN-30-EPDM-G14. 642 configurations in total.

GRIDLINE GRD

CLEATED FLAT CUP, RESISTS DEFORMATION UNDER LOAD, VENTS TRAPPED OIL

A cleated flat gripster. Raised support ribs stop the cup collapsing under load and vent trapped oil, so this gripper keeps its grip on oily press blanks and heavy panels where a plain flat cup would slide.

APPLICATIONS

oiled sheet metal, press lines, heavy panels, shear-loaded lifts

8 to 424	20 to 150	-40 to 150	55 to 60	5
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Graphite ESD

Amber

Deep Teal

Slate

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	No
Nitrile Antistatic	Graphite ESD	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	**Yes**
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	**Yes**	**Yes**	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	**Yes**	**Yes**	No	No
EPDM	Slate	60 Shore A	-40 to 130 °C -40 to 266 °F	1.15 g/cm³	No	No	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
20 mm / 0.787 in	4.4 mm / 0.173 in	0 mm / 0.0 in	0.21 ml / 0.013 in³	**8 N / 2 lbf**
25 mm / 0.984 in	5.5 mm / 0.217 in	0 mm / 0.0 in	0.4 ml / 0.024 in³	**12 N / 3 lbf**
30 mm / 1.181 in	6.6 mm / 0.26 in	0 mm / 0.0 in	0.7 ml / 0.043 in³	**17 N / 4 lbf**
40 mm / 1.575 in	8.8 mm / 0.346 in	0 mm / 0.0 in	1.66 ml / 0.101 in³	**30 N / 7 lbf**

Cup size	Height	Stroke	Internal volume	Holding force
50 mm / 1.969 in	11.0 mm / 0.433 in	0 mm / 0.0 in	3.24 ml / 0.198 in³	**47 N / 11 lbf**
60 mm / 2.362 in	13.2 mm / 0.52 in	0 mm / 0.0 in	5.6 ml / 0.342 in³	**68 N / 15 lbf**
75 mm / 2.953 in	16.5 mm / 0.65 in	0 mm / 0.0 in	10.93 ml / 0.667 in³	**106 N / 24 lbf**
88 mm / 3.465 in	19.4 mm / 0.764 in	0 mm / 0.0 in	17.7 ml / 1.08 in³	**146 N / 33 lbf**
110 mm / 4.331 in	24.2 mm / 0.953 in	0 mm / 0.0 in	34.5 ml / 2.105 in³	**228 N / 51 lbf**
150 mm / 5.906 in	33.0 mm / 1.299 in	0 mm / 0.0 in	87.47 ml / 5.338 in³	**424 N / 95 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/2 (BSPP) male, G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-GRD-[size]-[compound]-[connection], for example AV-GRD-60-EPDM-G14. 450 configurations in total.

STRIDE STR

1.5-FOLD BELLOWS, MODEST HEIGHT COMPENSATION, FAST CYCLE

A short one and a half fold bellows gripster. The single fold soaks up small height differences and reaches a slightly angled face while still cycling fast, a versatile everyday gripper.

APPLICATIONS

light cartons, slightly uneven parts, high-speed pick and place

2 to 99	10 to 75	-50 to 200	50 to 60	5
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Graphite ESD

Bone

Amber

Deep Teal

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	No
Nitrile Antistatic	Graphite ESD	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	**Yes**
Silicone	Bone	50 Shore A	-50 to 200 °C -58 to 392 °F	1.15 g/cm³	**Yes**	No	**Yes**	No
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	**Yes**	**Yes**	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	**Yes**	**Yes**	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
10 mm / 0.394 in	8.5 mm / 0.335 in	6 mm / 0.236 in	0.2 ml / 0.012 in³	**2 N / 0 lbf**
15 mm / 0.591 in	12.8 mm / 0.504 in	6 mm / 0.236 in	0.68 ml / 0.041 in³	**4 N / 1 lbf**
20 mm / 0.787 in	17.0 mm / 0.669 in	6 mm / 0.236 in	1.6 ml / 0.098 in³	**7 N / 2 lbf**
25 mm / 0.984 in	21.2 mm / 0.835 in	6 mm / 0.236 in	3.12 ml / 0.19 in³	**11 N / 2 lbf**

Cup size	Height	Stroke	Internal volume	Holding force
30 mm / 1.181 in	25.5 mm / 1.004 in	6 mm / 0.236 in	5.41 ml / 0.33 in³	**16 N / 4 lbf**
40 mm / 1.575 in	34.0 mm / 1.339 in	6 mm / 0.236 in	12.82 ml / 0.782 in³	**28 N / 6 lbf**
50 mm / 1.969 in	42.5 mm / 1.673 in	6 mm / 0.236 in	25.03 ml / 1.527 in³	**44 N / 10 lbf**
60 mm / 2.362 in	51.0 mm / 2.008 in	6 mm / 0.236 in	43.26 ml / 2.64 in³	**64 N / 14 lbf**
75 mm / 2.953 in	63.8 mm / 2.512 in	6 mm / 0.236 in	84.56 ml / 5.16 in³	**99 N / 22 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-STR-[size]-[compound]-[connection], for example AV-STR-30-HNBR-G14. 340 configurations in total.

VAULT VLT

2.5-FOLD BELLOWS, GENERAL PURPOSE STROKE FOR CARTON AND BAG HANDLING

The general purpose bellows gripster. Two and a half folds give real stroke for cartons, sacks and uneven tops, so one VAULT gripster covers most depalletising picks.

APPLICATIONS

corrugated cartons, sacks and bags, depalletising, uneven tops

4 to 128	15 to 88	-50 to 200	50 to 60	5
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Graphite ESD

Bone

Amber

Deep Teal

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	Yes	No	No
Nitrile Antistatic	Graphite ESD	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	Yes	No	Yes
Silicone	Bone	50 Shore A	-50 to 200 °C -58 to 392 °F	1.15 g/cm³	Yes	No	Yes	No
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	Yes	Yes	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	Yes	Yes	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
15 mm / 0.591 in	19.1 mm / 0.752 in	14 mm / 0.551 in	1.01 ml / 0.062 in³	**4 N / 1 lbf**
20 mm / 0.787 in	25.4 mm / 1.0 in	14 mm / 0.551 in	2.39 ml / 0.146 in³	**7 N / 2 lbf**
25 mm / 0.984 in	31.8 mm / 1.252 in	14 mm / 0.551 in	4.68 ml / 0.286 in³	**10 N / 2 lbf**
30 mm / 1.181 in	38.1 mm / 1.5 in	14 mm / 0.551 in	8.08 ml / 0.493 in³	**15 N / 3 lbf**

Cup size	Height	Stroke	Internal volume	Holding force
40 mm / 1.575 in	50.8 mm / 2.0 in	14 mm / 0.551 in	19.15 ml / 1.169 in³	**26 N / 6 lbf**
50 mm / 1.969 in	63.5 mm / 2.5 in	14 mm / 0.551 in	37.4 ml / 2.282 in³	**41 N / 9 lbf**
60 mm / 2.362 in	76.2 mm / 3.0 in	14 mm / 0.551 in	64.64 ml / 3.945 in³	**59 N / 13 lbf**
75 mm / 2.953 in	95.2 mm / 3.748 in	14 mm / 0.551 in	126.17 ml / 7.699 in³	**93 N / 21 lbf**
88 mm / 3.465 in	111.8 mm / 4.402 in	14 mm / 0.551 in	203.99 ml / 12.448 in³	**128 N / 29 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/2 (BSPP) male, G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-VLT-[size]-[compound]-[connection], for example AV-VLT-40-HNBR-G14. 375 configurations in total.

REACH RCH

3.5-FOLD BELLOWS, MAXIMUM STROKE FOR STEPPED AND UNEVEN PICKS

The long stroke gripster. Three and a half folds reach deep into stepped and uneven stacks, letting a single gripper touch down on parts at very different heights.

APPLICATIONS

stepped surfaces, mixed-height layers, shrink-wrapped bundles

6 to 185	20 to 110	-50 to 200	50 to 60	4
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Bone

Amber

Deep Teal

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	Yes	No	No
Silicone	Bone	50 Shore A	-50 to 200 °C -58 to 392 °F	1.15 g/cm³	Yes	No	Yes	No
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	Yes	Yes	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	Yes	Yes	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
20 mm / 0.787 in	33.8 mm / 1.331 in	24 mm / 0.945 in	3.19 ml / 0.195 in³	**6 N / 1 lbf**
30 mm / 1.181 in	50.7 mm / 1.996 in	24 mm / 0.945 in	10.75 ml / 0.656 in³	**14 N / 3 lbf**
40 mm / 1.575 in	67.6 mm / 2.661 in	24 mm / 0.945 in	25.48 ml / 1.555 in³	**24 N / 6 lbf**
50 mm / 1.969 in	84.5 mm / 3.327 in	24 mm / 0.945 in	49.77 ml / 3.037 in³	**38 N / 9 lbf**
60 mm / 2.362 in	101.4 mm / 3.992 in	24 mm / 0.945 in	86.01 ml / 5.249 in³	**55 N / 12 lbf**
75 mm / 2.953 in	126.8 mm / 4.992 in	24 mm / 0.945 in	168.06 ml / 10.256 in³	**86 N / 19 lbf**

Cup size	Height	Stroke	Internal volume	Holding force
88 mm / 3.465 in	148.7 mm / 5.854 in	24 mm / 0.945 in	271.32 ml / 16.557 in³	**119 N / 27 lbf**
110 mm / 4.331 in	185.9 mm / 7.319 in	24 mm / 0.945 in	530.0 ml / 32.343 in³	**185 N / 42 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/2 (BSPP) male, G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-RCH-[size]-[compound]-[connection], for example AV-RCH-60-HNBR-G14. 292 configurations in total.

BASIN BSN

DEEP ROUND CUP FOR STRONGLY CURVED AND CYLINDRICAL PARTS

A deep, thimble shaped gripster for round work. Tall walls wrap bottles, cans and pipes, so the gripster seals on a strong curve where a flat cup cannot.

APPLICATIONS

bottles, cans, pipes, curved automotive trim

2 to 26	10 to 40	-50 to 200	50 to 60	4
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Bone

Amber

Deep Teal

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	Yes	No	No
Silicone	Bone	50 Shore A	-50 to 200 °C -58 to 392 °F	1.15 g/cm³	Yes	No	Yes	No
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	Yes	Yes	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	Yes	Yes	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
10 mm / 0.394 in	9.0 mm / 0.354 in	0 mm / 0.0 in	0.39 ml / 0.024 in³	**2 N / 0 lbf**
15 mm / 0.591 in	13.5 mm / 0.531 in	0 mm / 0.0 in	1.31 ml / 0.08 in³	**4 N / 1 lbf**
20 mm / 0.787 in	18.0 mm / 0.709 in	0 mm / 0.0 in	3.11 ml / 0.19 in³	**7 N / 2 lbf**
25 mm / 0.984 in	22.5 mm / 0.886 in	0 mm / 0.0 in	6.07 ml / 0.37 in³	**10 N / 2 lbf**
30 mm / 1.181 in	27.0 mm / 1.063 in	0 mm / 0.0 in	10.5 ml / 0.641 in³	**15 N / 3 lbf**
40 mm / 1.575 in	36.0 mm / 1.417 in	0 mm / 0.0 in	24.88 ml / 1.518 in³	**26 N / 6 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-BSN-[size]-[compound]-[connection], for example AV-BSN-25-HNBR-G14. 160 configurations in total.

SPAN SPN

OVAL FLAT CUP, MAXIMUM AREA ON NARROW PROFILES

An oval flat gripster for narrow work. The racetrack shape lays maximum sealed area along timber strips, extrusions and rails, a gripper built for long thin parts.

APPLICATIONS

timber strips, extrusions, narrow rails, edge banding

4 to 144	10 to 60	-40 to 150	55 to 60	5
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Graphite ESD

Amber

Deep Teal

Slate

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	No
Nitrile Antistatic	Graphite ESD	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	**Yes**
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	**Yes**	**Yes**	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	**Yes**	**Yes**	No	No
EPDM	Slate	60 Shore A	-40 to 130 °C -40 to 266 °F	1.15 g/cm³	No	No	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
10×20 mm / 0.394×0.787 in	2.2 mm / 0.087 in	0 mm / 0.0 in	0.05 ml / 0.003 in³	**4 N / 1 lbf**
15×30 mm / 0.591×1.181 in	3.3 mm / 0.13 in	0 mm / 0.0 in	0.17 ml / 0.01 in³	**9 N / 2 lbf**
20×40 mm / 0.787×1.575 in	4.4 mm / 0.173 in	0 mm / 0.0 in	0.41 ml / 0.025 in³	**16 N / 4 lbf**
25×50 mm / 0.984×1.969 in	5.5 mm / 0.217 in	0 mm / 0.0 in	0.81 ml / 0.049 in³	**25 N / 6 lbf**

Cup size	Height	Stroke	Internal volume	Holding force
30×60 mm / 1.181×2.362 in	6.6 mm / 0.26 in	0 mm / 0.0 in	1.4 ml / 0.085 in³	**36 N / 8 lbf**
40×80 mm / 1.575×3.15 in	8.8 mm / 0.346 in	0 mm / 0.0 in	3.32 ml / 0.203 in³	**64 N / 14 lbf**
50×100 mm / 1.969×3.937 in	11.0 mm / 0.433 in	0 mm / 0.0 in	6.48 ml / 0.395 in³	**100 N / 22 lbf**
60×120 mm / 2.362×4.724 in	13.2 mm / 0.52 in	0 mm / 0.0 in	11.2 ml / 0.683 in³	**144 N / 32 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-SPN-[size]-[compound]-[connection], for example AV-SPN-30x60-EPDM-G14. 295 configurations in total.

SPANFLEX SPF

OVAL BELLOWS, NARROW FOOTPRINT WITH HEIGHT COMPENSATION

The oval bellows gripster. It keeps the narrow footprint of SPAN and adds a fold of height compensation for uneven profiles and narrow cartons.

APPLICATIONS

narrow cartons, uneven timber, profile handling

8 to 54	15 to 40	-50 to 200	50 to 60	4
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Bone

Amber

Deep Teal

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	Yes	No	No
Silicone	Bone	50 Shore A	-50 to 200 °C -58 to 392 °F	1.15 g/cm³	Yes	No	Yes	No
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	Yes	Yes	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	Yes	Yes	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
15×30 mm / 0.591×1.181 in	12.8 mm / 0.504 in	8 mm / 0.315 in	1.36 ml / 0.083 in³	**8 N / 2 lbf**
20×40 mm / 0.787×1.575 in	17.0 mm / 0.669 in	8 mm / 0.315 in	3.2 ml / 0.195 in³	**14 N / 3 lbf**
25×50 mm / 0.984×1.969 in	21.2 mm / 0.835 in	8 mm / 0.315 in	6.24 ml / 0.381 in³	**21 N / 5 lbf**
30×60 mm / 1.181×2.362 in	25.5 mm / 1.004 in	8 mm / 0.315 in	10.81 ml / 0.66 in³	**30 N / 7 lbf**
40×80 mm / 1.575×3.15 in	34.0 mm / 1.339 in	8 mm / 0.315 in	25.64 ml / 1.565 in³	**54 N / 12 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-SPF-[size]-[compound]-[connection], for example AV-SPF-25x50-HNBR-G14. 148 configurations in total.

WISP WSP

MICRO PRECISION CUP FOR ELECTRONICS AND THIN FILM

The micro precision gripster. A tiny tip on a slender stem picks SMD parts, wafers, lenses and labels where every gram and every millimetre of clearance counts.

APPLICATIONS

SMD components, wafers, lens blanks, thin film, labels

0 to 1	1 to 8	-50 to 200	50 to 55	3
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite ESD

Bone

Deep Teal

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile Antistatic	Graphite ESD	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	**Yes**
Silicone	Bone	50 Shore A	-50 to 200 °C -58 to 392 °F	1.15 g/cm³	**Yes**	No	**Yes**	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	**Yes**	**Yes**	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
1 mm / 0.039 in	1.5 mm / 0.059 in	0 mm / 0.0 in	0.0 ml / 0.0 in³	**0 N / 0 lbf**
2 mm / 0.079 in	1.5 mm / 0.059 in	0 mm / 0.0 in	0.0 ml / 0.0 in³	**0 N / 0 lbf**
3 mm / 0.118 in	1.5 mm / 0.059 in	0 mm / 0.0 in	0.0 ml / 0.0 in³	**0 N / 0 lbf**
4 mm / 0.157 in	2.0 mm / 0.079 in	0 mm / 0.0 in	0.0 ml / 0.0 in³	**0 N / 0 lbf**
5 mm / 0.197 in	2.5 mm / 0.098 in	0 mm / 0.0 in	0.01 ml / 0.001 in³	**0 N / 0 lbf**
6 mm / 0.236 in	3.0 mm / 0.118 in	0 mm / 0.0 in	0.01 ml / 0.001 in³	**1 N / 0 lbf**
8 mm / 0.315 in	4.0 mm / 0.157 in	0 mm / 0.0 in	0.03 ml / 0.002 in³	**1 N / 0 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Cup only, no fitting (for custom holders), M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-WSP-[size]-[compound]-[connection], for example AV-WSP-4-HNBR-G14. 54 configurations in total.

EMBER EMB

HIGH-TEMPERATURE FLAT CUP FOR HOT GLASS AND FORMED SHEET

The high temperature gripster. A heat resistant compound and a shielded fitting let this gripper handle hot glass, hot formed sheet and heated tooling that would destroy a standard cup.

APPLICATIONS

hot glass, hot-formed sheet, heated tooling, annealing lines

8 to 106	20 to 75	-50 to 260	60	1
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Ember Red

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
High-Temp Silicone	Ember Red	60 Shore A	-50 to 260 °C -58 to 500 °F	1.25 g/cm³	Yes	No	Yes	No

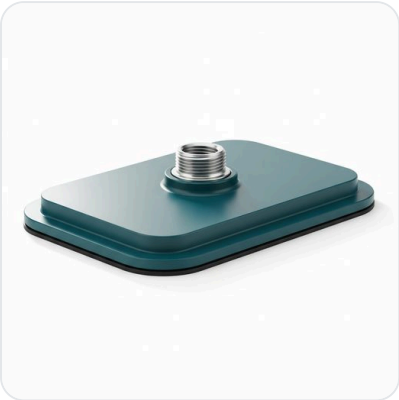
Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
20 mm / 0.787 in	4.4 mm / 0.173 in	0 mm / 0.0 in	0.21 ml / 0.013 in³	**8 N / 2 lbf**
30 mm / 1.181 in	6.6 mm / 0.26 in	0 mm / 0.0 in	0.7 ml / 0.043 in³	**17 N / 4 lbf**
40 mm / 1.575 in	8.8 mm / 0.346 in	0 mm / 0.0 in	1.66 ml / 0.101 in³	**30 N / 7 lbf**
50 mm / 1.969 in	11.0 mm / 0.433 in	0 mm / 0.0 in	3.24 ml / 0.198 in³	**47 N / 11 lbf**
60 mm / 2.362 in	13.2 mm / 0.52 in	0 mm / 0.0 in	5.6 ml / 0.342 in³	**68 N / 15 lbf**
75 mm / 2.953 in	16.5 mm / 0.65 in	0 mm / 0.0 in	10.93 ml / 0.667 in³	**106 N / 24 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-EMB-[size]-[compound]-[connection], for example AV-EMB-50-VMQF-G14. 53 configurations in total.

MESA MSA

RECTANGULAR FLAT PAD, MAXIMUM SEALED AREA ON FLAT PANELS

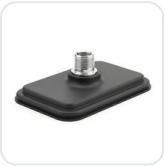


A rectangular flat gripster. Straight edges tile neatly across large flat panels, glass and solar modules, giving even more sealed area than a round gripper of the same span.

APPLICATIONS

large flat panels, glass sheet, solar modules, flat furniture board

12 to 309	30 to 160	-40 to 150	55 to 60	5
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS



Graphite

Graphite ESD

Amber

Deep Teal

Slate

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	No
Nitrile Antistatic	Graphite ESD	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	**Yes**
Polyurethane	Amber	60 Shore A	-20 to 60 °C -4 to 140 °F	1.2 g/cm³	**Yes**	**Yes**	No	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	**Yes**	**Yes**	No	No
EPDM	Slate	60 Shore A	-40 to 130 °C -40 to 266 °F	1.15 g/cm³	No	No	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
30×20 mm / 1.181×0.787 in	6.6 mm / 0.26 in	0 mm / 0.0 in	0.47 ml / 0.029 in³	**12 N / 3 lbf**
40×25 mm / 1.575×0.984 in	8.8 mm / 0.346 in	0 mm / 0.0 in	1.04 ml / 0.063 in³	**19 N / 4 lbf**
60×40 mm / 2.362×1.575 in	13.2 mm / 0.52 in	0 mm / 0.0 in	3.73 ml / 0.228 in³	**46 N / 10 lbf**
80×50 mm / 3.15×1.969 in	17.6 mm / 0.693 in	0 mm / 0.0 in	8.29 ml / 0.506 in³	**77 N / 17 lbf**

Cup size	Height	Stroke	Internal volume	Holding force
100×60 mm / 3.937×2.362 in	22.0 mm / 0.866 in	0 mm / 0.0 in	15.55 ml / 0.949 in³	**116 N / 26 lbf**
120×80 mm / 4.724×3.15 in	26.4 mm / 1.039 in	0 mm / 0.0 in	29.86 ml / 1.822 in³	**186 N / 42 lbf**
160×100 mm / 6.299×3.937 in	35.2 mm / 1.386 in	0 mm / 0.0 in	66.35 ml / 4.049 in³	**309 N / 70 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/2 (BSPP) male, G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-MSA-[size]-[compound]-[connection], for example AV-MSA-80x50-EPDM-G14. 330 configurations in total.

PLUME PLM

SOFT MULTI-FOLD BELLOWS, GENTLE GRIP ON BAGS, FILM AND POUCHES

The soft, gentle gripster. A tall stack of slim folds lets this gripper draw down onto bags, film and pouches without crushing or marking the pack.

APPLICATIONS

poly bags, shrink film, pouches, soft flexible packs

3 to 51	15 to 60	-50 to 200	50 to 55	3
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Bone

Deep Teal

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	**Yes**	No	No
Silicone	Bone	50 Shore A	-50 to 200 °C -58 to 392 °F	1.15 g/cm³	**Yes**	No	**Yes**	No
Hydrogenated Nitrile	Deep Teal	55 Shore A	-30 to 150 °C -22 to 302 °F	1.25 g/cm³	**Yes**	**Yes**	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
15 mm / 0.591 in	28.5 mm / 1.122 in	30 mm / 1.181 in	1.51 ml / 0.092 in³	**3 N / 1 lbf**
20 mm / 0.787 in	38.0 mm / 1.496 in	30 mm / 1.181 in	3.58 ml / 0.218 in³	**6 N / 1 lbf**
25 mm / 0.984 in	47.5 mm / 1.87 in	30 mm / 1.181 in	6.99 ml / 0.427 in³	**9 N / 2 lbf**
30 mm / 1.181 in	57.0 mm / 2.244 in	30 mm / 1.181 in	12.09 ml / 0.738 in³	**13 N / 3 lbf**
40 mm / 1.575 in	76.0 mm / 2.992 in	30 mm / 1.181 in	28.65 ml / 1.748 in³	**23 N / 5 lbf**
50 mm / 1.969 in	95.0 mm / 3.74 in	30 mm / 1.181 in	55.96 ml / 3.415 in³	**35 N / 8 lbf**
60 mm / 2.362 in	114.0 mm / 4.488 in	30 mm / 1.181 in	96.7 ml / 5.901 in³	**51 N / 11 lbf**

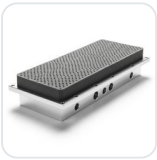
Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 4 mm ID tubing, Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8 (BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, M5 (Metric) male, with NPT options on pipe sizes.
Order code AV-PLM-[size]-[compound]-[connection], for example AV-PLM-30-HNBR-G14. 168 configurations in total.

02

Area & Foam Grippers

When the surface is porous, uneven or arrives in mixed stacks, a single sealing cup will not hold. Our area grippers, also called foam gripsters, spread the vacuum across a whole foam face so one gripster lifts a full carton layer, a rough board or a leaky sack with no fussy positioning.

DRIFT



MEADOW

DRIFT DRF

FOAM AREA PAD, GRIPS MIXED-HEIGHT AND POROUS LOADS WITHOUT A SEAL

A foam area gripster. A block of closed cell foam seals across mixed and porous loads, so one gripper lifts rough timber, board and irregular parts with no precise positioning.

APPLICATIONS

mixed pallets, porous board, rough timber, irregular loads

68 to 2430	100 to 600	-40 to 130	55 to 60	2
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS

Graphite

Slate

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	Yes	No	No
EPDM	Slate	60 Shore A	-40 to 130 °C -40 to 266 °F	1.15 g/cm³	No	No	No	No

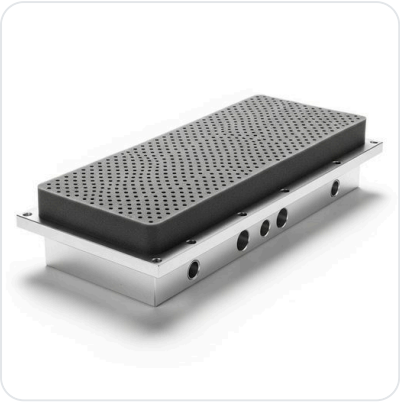
Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
100×50 mm / 3.937×1.969 in	25.0 mm / 0.984 in	0 mm / 0.0 in	6.25 ml / 0.381 in³	**68 N / 15 lbf**
200×100 mm / 7.874×3.937 in	25.0 mm / 0.984 in	0 mm / 0.0 in	25.0 ml / 1.526 in³	**270 N / 61 lbf**
300×150 mm / 11.811×5.906 in	25.0 mm / 0.984 in	0 mm / 0.0 in	56.25 ml / 3.433 in³	**608 N / 137 lbf**
400×200 mm / 15.748×7.874 in	25.0 mm / 0.984 in	0 mm / 0.0 in	100.0 ml / 6.102 in³	**1080 N / 243 lbf**
600×300 mm / 23.622×11.811 in	25.0 mm / 0.984 in	0 mm / 0.0 in	225.0 ml / 13.73 in³	**2430 N / 546 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/2 (BSPP) male, G1/4 (BSPP) female, G1/4 (BSPP) male, G1/8 (BSPP) female, G1/8 (BSPP) male, G3/8 (BSPP) male, with NPT options on pipe sizes.
Order code AV-DRF-[size]-[compound]-[connection], for example AV-DRF-300x150-EPDM-G14. 80 configurations in total.

MEADOW MDW

LARGE SEALED AREA GRIPPER, ONE PAD GRIPS WHOLE LAYERS

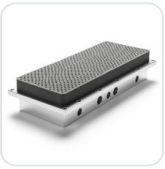


The big sealed area gripster. A full foam face on an aluminium manifold lets a single gripper pick a whole carton layer or a full sheet of board in one move.

APPLICATIONS

full carton layers, plywood sheet, mixed pallets, porous board

754 to 6786	400 to 1200	-40 to 130	55 to 60	2
HOLDING FORCE, N	CUP SIZE, MM	TEMPERATURE, °C	HARDNESS, SHORE A	COMPOUNDS



Graphite

Slate

Material options

Compound	Colour	Hardness	Temperature	Density	Non mark	Oil	FDA	ESD
Nitrile	Graphite	55 Shore A	-30 to 105 °C -22 to 221 °F	1.25 g/cm³	No	Yes	No	No
EPDM	Slate	60 Shore A	-40 to 130 °C -40 to 266 °F	1.15 g/cm³	No	No	No	No

Sizes and performance

Cup size	Height	Stroke	Internal volume	Holding force
400×200 mm / 15.748×7.874 in	30.0 mm / 1.181 in	0 mm / 0.0 in	94.25 ml / 5.752 in³	**754 N / 170 lbf**
600×300 mm / 23.622×11.811 in	30.0 mm / 1.181 in	0 mm / 0.0 in	212.06 ml / 12.941 in³	**1696 N / 381 lbf**
800×400 mm / 31.496×15.748 in	30.0 mm / 1.181 in	0 mm / 0.0 in	376.99 ml / 23.005 in³	**3016 N / 678 lbf**
1000×500 mm / 39.37×19.685 in	30.0 mm / 1.181 in	0 mm / 0.0 in	589.05 ml / 35.946 in³	**4712 N / 1059 lbf**
1200×600 mm / 47.244×23.622 in	30.0 mm / 1.181 in	0 mm / 0.0 in	848.23 ml / 51.762 in³	**6786 N / 1526 lbf**

Recommended vacuum −60 kPa (17.7 inHg, 59%) at safety factor 2. **Connections** Barbed stem for 6 mm ID tubing, Cup only, no fitting (for custom holders), G1/2 (BSPP) male, G1/4 (BSPP) female, G1/4 (BSPP) male, G1/4 (BSPP) spring, G1/8 (BSPP) female, G1/8

(BSPP) male, G1/8 (BSPP) spring, G3/8 (BSPP) male, with NPT options on pipe sizes.

Order code AV-MDW-[size]-[compound]-[connection], for example AV-MDW-800x400-EPDM-G14. 100 configurations in total.

03

Robotic EOAT

Robot arms need more than a cup. These end of arm gripsters add the compensation, articulation and multiplication that turn a single vacuum point into a production tool, from ball jointed swivels to multi cup array grippers on a shared plenum.

PIVOT

STALK

CLUSTER

PIVOT PVT

BALL-JOINT SWIVEL MOUNT, CUPS SELF-ALIGN TO ANGLED FACES, SWIVEL MOUNT

A ball jointed swivel gripster mount. The gripper self aligns to angled and curved faces, taking the guesswork out of picks that are never quite square.

APPLICATIONS

angled panels, curved bodywork, irregular tops

±30°	20 to 60	3
SWIVEL ANGLE	CUP DIAMETER, MM	MOUNT THREADS

Range and specifications (12 order codes)

Order code	Mount thread	Swivel angle	Max cup diameter
AV-PVT-M05-20	M5	±30°	20 mm / 0.787 in
AV-PVT-M05-30	M5	±30°	30 mm / 1.181 in
AV-PVT-M05-40	M5	±30°	40 mm / 1.575 in
AV-PVT-M05-60	M5	±30°	60 mm / 2.362 in
AV-PVT-G18-20	G1/8	±30°	20 mm / 0.787 in
AV-PVT-G18-30	G1/8	±30°	30 mm / 1.181 in
AV-PVT-G18-40	G1/8	±30°	40 mm / 1.575 in
AV-PVT-G18-60	G1/8	±30°	60 mm / 2.362 in
AV-PVT-G14-20	G1/4	±30°	20 mm / 0.787 in
AV-PVT-G14-30	G1/4	±30°	30 mm / 1.181 in
AV-PVT-G14-40	G1/4	±30°	40 mm / 1.575 in
AV-PVT-G14-60	G1/4	±30°	60 mm / 2.362 in

STALK STK

SPRING COMPENSATOR, SOFT TOUCHDOWN, EVEN LOAD SHARING, LEVEL COMPENSATOR

A spring loaded gripster mount. The plunger gives a soft touchdown and shares load evenly across a set of grippers, protecting delicate parts.

APPLICATIONS

stacked height variation, delicate contact, multi-cup levelling

10 to 50
STROKE, MM

2
MOUNT THREADS

Range and specifications (8 order codes)

Order code	Mount thread	Stroke	Spring
AV-STK-G18-S10	G1/8	10 mm / 0.394 in	Stainless, non rotating
AV-STK-G18-S20	G1/8	20 mm / 0.787 in	Stainless, non rotating
AV-STK-G18-S30	G1/8	30 mm / 1.181 in	Stainless, non rotating
AV-STK-G18-S50	G1/8	50 mm / 1.969 in	Stainless, non rotating
AV-STK-G14-S10	G1/4	10 mm / 0.394 in	Stainless, non rotating
AV-STK-G14-S20	G1/4	20 mm / 0.787 in	Stainless, non rotating
AV-STK-G14-S30	G1/4	30 mm / 1.181 in	Stainless, non rotating
AV-STK-G14-S50	G1/4	50 mm / 1.969 in	Stainless, non rotating

CLUSTER CLU

MULTI-CUP ARRAY, GRIP A WHOLE PART IN ONE PLENUM, MULTI-CUP ARRAY

A multi cup array gripster. Several cups on one plenum turn a robot flange into a wide gripper that lifts large panels and full layers in a single pick.

APPLICATIONS

large panels, full layers, long extrusions, robot palletising

2 to 8
CUPS PER GRIPSTER

53 to 401
HOLD FORCE, N

Range and specifications (8 order codes)

Order code	Cups	Cup family	Holding force
AV-CLU-2X-VLT40	2	VAULT 40 mm	53 N / 12 lbf
AV-CLU-2X-PLN50	2	PLANO 50 mm	100 N / 22 lbf
AV-CLU-4X-VLT40	4	VAULT 40 mm	106 N / 24 lbf
AV-CLU-4X-PLN50	4	PLANO 50 mm	200 N / 45 lbf
AV-CLU-6X-VLT40	6	VAULT 40 mm	158 N / 36 lbf
AV-CLU-6X-PLN50	6	PLANO 50 mm	300 N / 68 lbf
AV-CLU-8X-VLT40	8	VAULT 40 mm	211 N / 48 lbf
AV-CLU-8X-PLN50	8	PLANO 50 mm	401 N / 90 lbf

04

Vacuum Generators & Pumps

Every gripster needs vacuum. Our venturi generators make it on the spot from shop compressed air with no moving parts to wear, so the vacuum sits centimetres from the gripper and the response is instant.

GUST

CYCLONE

VORTEX

GUST GST

COMPACT SINGLE-STAGE VENTURI, FAST, SIMPLE, INLINE

A compact single stage venturi that feeds a gripster with vacuum straight from shop air, mounted right at the tool for instant response.

APPLICATIONS

single-cup pick and place, compact EOAT, light handling

85 %	20 to 90	0.7 to 1.5	1
MAX VACUUM	SUCTION FLOW, NL/MIN	NOZZLE BORE, MM	EJECTOR STAGES

Range and specifications (8 order codes)

Order code	Nozzle bore	Vacuum port	Max vacuum	Suction flow	Air use	Weight
AV-GST-N07-G18	0.7 mm / 0.028 in	G1/8	85 %	20 Nl/min	27 Nl/min	136 g
AV-GST-N07-G14	0.7 mm / 0.028 in	G1/4	85 %	20 Nl/min	27 Nl/min	136 g
AV-GST-N09-G18	0.9 mm / 0.035 in	G1/8	85 %	32 Nl/min	45 Nl/min	142 g
AV-GST-N09-G14	0.9 mm / 0.035 in	G1/4	85 %	32 Nl/min	45 Nl/min	142 g
AV-GST-N12-G18	1.2 mm / 0.047 in	G1/8	85 %	58 Nl/min	79 Nl/min	151 g
AV-GST-N12-G14	1.2 mm / 0.047 in	G1/4	85 %	58 Nl/min	79 Nl/min	151 g
AV-GST-N15-G18	1.5 mm / 0.059 in	G1/8	85 %	90 Nl/min	124 Nl/min	160 g
AV-GST-N15-G14	1.5 mm / 0.059 in	G1/4	85 %	90 Nl/min	124 Nl/min	160 g

CYCLONE CYC

MULTI-STAGE VENTURI, HIGH SUCTION FLOW FOR BIG OR LEAKY LOADS

A multi stage venturi for high flow. When a gripster faces porous or leaky loads, CYCLONE keeps the vacuum up where a single stage would fade.

APPLICATIONS

porous cartons, large area grippers, high-flow depalletising

90 %	127 to 550	1.2 to 2.5	3
MAX VACUUM	SUCTION FLOW, NL/MIN	NOZZLE BORE, MM	EJECTOR STAGES

Range and specifications (12 order codes)

Order code	Nozzle bore	Vacuum port	Max vacuum	Suction flow	Air use	Weight
AV-CYC-N12-G14	1.2 mm / 0.047 in	G1/4	90 %	127 Nl/min	79 Nl/min	201 g
AV-CYC-N12-G38	1.2 mm / 0.047 in	G3/8	90 %	127 Nl/min	79 Nl/min	201 g
AV-CYC-N12-G12	1.2 mm / 0.047 in	G1/2	90 %	127 Nl/min	79 Nl/min	201 g
AV-CYC-N15-G14	1.5 mm / 0.059 in	G1/4	90 %	198 Nl/min	124 Nl/min	210 g
AV-CYC-N15-G38	1.5 mm / 0.059 in	G3/8	90 %	198 Nl/min	124 Nl/min	210 g
AV-CYC-N15-G12	1.5 mm / 0.059 in	G1/2	90 %	198 Nl/min	124 Nl/min	210 g
AV-CYC-N20-G14	2 mm / 0.079 in	G1/4	90 %	352 Nl/min	220 Nl/min	225 g
AV-CYC-N20-G38	2 mm / 0.079 in	G3/8	90 %	352 Nl/min	220 Nl/min	225 g
AV-CYC-N20-G12	2 mm / 0.079 in	G1/2	90 %	352 Nl/min	220 Nl/min	225 g
AV-CYC-N25-G14	2.5 mm / 0.098 in	G1/4	90 %	550 Nl/min	344 Nl/min	240 g
AV-CYC-N25-G38	2.5 mm / 0.098 in	G3/8	90 %	550 Nl/min	344 Nl/min	240 g
AV-CYC-N25-G12	2.5 mm / 0.098 in	G1/2	90 %	550 Nl/min	344 Nl/min	240 g

VORTEX VTX

VALVE-INTEGRATED GENERATOR, VACUUM, BLOW-OFF AND CONTROL IN ONE

A generator with vacuum, blow off and control in one body, so a gripster picks, releases fast and saves air between cycles.

APPLICATIONS

energy-saving cells, fast release cycles, integrated automation

88 %	52 to 144	0.9 to 1.5	2
MAX VACUUM	SUCTION FLOW, NL/MIN	NOZZLE BORE, MM	EJECTOR STAGES

Range and specifications (6 order codes)

Order code	Nozzle bore	Vacuum port	Max vacuum	Suction flow	Air use	Weight
AV-VTX-N09-G18	0.9 mm / 0.035 in	G1/8	88 %	52 Nl/min	45 Nl/min	167 g
AV-VTX-N09-G14	0.9 mm / 0.035 in	G1/4	88 %	52 Nl/min	45 Nl/min	167 g
AV-VTX-N12-G18	1.2 mm / 0.047 in	G1/8	88 %	92 Nl/min	79 Nl/min	176 g
AV-VTX-N12-G14	1.2 mm / 0.047 in	G1/4	88 %	92 Nl/min	79 Nl/min	176 g
AV-VTX-N15-G18	1.5 mm / 0.059 in	G1/8	88 %	144 Nl/min	124 Nl/min	185 g
AV-VTX-N15-G14	1.5 mm / 0.059 in	G1/4	88 %	144 Nl/min	124 Nl/min	185 g

05

Tube Lifters

For hand loading and unloading, the tube lifter turns one operator into a whole day of effortless lifts. The lifting gripster grips the load while the balancer tube carries the weight.

HOIST

HOIST HST

ERGONOMIC VACUUM TUBE LIFTER, ONE OPERATOR, WHOLE-DAY LIFTING

An ergonomic tube lifter. The lifting gripster grips the load while the tube carries the weight, turning one operator into a full shift of easy lifts.

APPLICATIONS

cartons, sheet material, sacks, drums and pails

12 to 270	100 to 160	2.0
CAPACITY, KG	TUBE BORE, MM	HOSE LENGTH, M

Range and specifications (12 order codes)

Order code	Tube bore	Duty class	Capacity	Hose
AV-HST-T100-L	100 mm / 3.937 in	Light	12 kg / 26.5 lb	2.0 m / 6.6 ft
AV-HST-T100-S	100 mm / 3.937 in	Standard	20 kg / 44.1 lb	2.0 m / 6.6 ft
AV-HST-T100-H	100 mm / 3.937 in	Heavy	30 kg / 66.1 lb	2.0 m / 6.6 ft
AV-HST-T120-L	120 mm / 4.724 in	Light	27 kg / 59.5 lb	2.0 m / 6.6 ft
AV-HST-T120-S	120 mm / 4.724 in	Standard	45 kg / 99.2 lb	2.0 m / 6.6 ft
AV-HST-T120-H	120 mm / 4.724 in	Heavy	68 kg / 149.9 lb	2.0 m / 6.6 ft
AV-HST-T140-L	140 mm / 5.512 in	Light	54 kg / 119.0 lb	2.0 m / 6.6 ft
AV-HST-T140-S	140 mm / 5.512 in	Standard	90 kg / 198.4 lb	2.0 m / 6.6 ft
AV-HST-T140-H	140 mm / 5.512 in	Heavy	135 kg / 297.6 lb	2.0 m / 6.6 ft
AV-HST-T160-L	160 mm / 6.299 in	Light	108 kg / 238.1 lb	2.0 m / 6.6 ft
AV-HST-T160-S	160 mm / 6.299 in	Standard	180 kg / 396.8 lb	2.0 m / 6.6 ft
AV-HST-T160-H	160 mm / 6.299 in	Heavy	270 kg / 595.2 lb	2.0 m / 6.6 ft

06

Components & Accessories

The small parts that make a gripster system reliable: filters that keep grit out, check valves that hold grip if air drops, switches that confirm the pick, and adapters that let any gripper meet any port.

FILTRA

GATE

SENSA

FLEXOR

LINK

FILTRA FLT

INLINE VACUUM FILTER, KEEPS DUST OUT OF GENERATORS AND VALVES, INLINE FILTER

An inline filter that keeps dust and grit out of the generator and the gripster, protecting the whole vacuum line.

APPLICATIONS

protect generators, dusty environments, porous material lines

5 to 50
FILTRATION, MM

4
PORT SIZES

Range and specifications (16 order codes)

Order code	Port thread	Filtration	Bowl
AV-FLT-G18-5U	G1/8	5 µm	Clear polycarbonate
AV-FLT-G18-10U	G1/8	10 µm	Clear polycarbonate
AV-FLT-G18-25U	G1/8	25 µm	Clear polycarbonate
AV-FLT-G18-50U	G1/8	50 µm	Clear polycarbonate
AV-FLT-G14-5U	G1/4	5 µm	Clear polycarbonate
AV-FLT-G14-10U	G1/4	10 µm	Clear polycarbonate
AV-FLT-G14-25U	G1/4	25 µm	Clear polycarbonate
AV-FLT-G14-50U	G1/4	50 µm	Clear polycarbonate
AV-FLT-G38-5U	G3/8	5 µm	Clear polycarbonate
AV-FLT-G38-10U	G3/8	10 µm	Clear polycarbonate
AV-FLT-G38-25U	G3/8	25 µm	Clear polycarbonate
AV-FLT-G38-50U	G3/8	50 µm	Clear polycarbonate
AV-FLT-G12-5U	G1/2	5 µm	Clear polycarbonate
AV-FLT-G12-10U	G1/2	10 µm	Clear polycarbonate
AV-FLT-G12-25U	G1/2	25 µm	Clear polycarbonate
AV-FLT-G12-50U	G1/2	50 µm	Clear polycarbonate

GATE GTE

VACUUM CHECK VALVE, HOLDS GRIP IF SUPPLY DROPS, CHECK VALVE

A check valve that holds a gripster's grip if the supply pressure dips, a simple part that makes a lift fail safe.

APPLICATIONS

fail-safe holding, multi-zone isolation, energy saving

0.02 to 0.1
CRACKING, BAR

3
PORT SIZES

Range and specifications (9 order codes)

Order code	Port thread	Cracking pressure	Direction
AV-GTE-G18-002	G1/8	0.02 bar / 0.3 psi	One way
AV-GTE-G18-005	G1/8	0.05 bar / 0.7 psi	One way
AV-GTE-G18-01	G1/8	0.1 bar / 1.5 psi	One way
AV-GTE-G14-002	G1/4	0.02 bar / 0.3 psi	One way
AV-GTE-G14-005	G1/4	0.05 bar / 0.7 psi	One way
AV-GTE-G14-01	G1/4	0.1 bar / 1.5 psi	One way
AV-GTE-G38-002	G3/8	0.02 bar / 0.3 psi	One way
AV-GTE-G38-005	G3/8	0.05 bar / 0.7 psi	One way
AV-GTE-G38-01	G3/8	0.1 bar / 1.5 psi	One way

SENSA SNS

DIGITAL VACUUM SWITCH, VERIFY GRIP BEFORE EVERY MOVE, VACUUM SWITCH

A digital vacuum switch that confirms a gripster has truly gripped before the robot moves, and alarms on a leak.

APPLICATIONS

grip confirmation, closed-loop control, leak alarms

−100 to 0	3	2
RANGE, KPA	OUTPUT TYPES	PORT SIZES

Range and specifications (6 order codes)

Order code	Port thread	Output	Range	Supply
AV-SNS-G18-PNP	G1/8	PNP	−100 to 0 kPa	12 to 24 V DC
AV-SNS-G18-NPN	G1/8	NPN	−100 to 0 kPa	12 to 24 V DC
AV-SNS-G18-Analog	G1/8	Analog	−100 to 0 kPa	12 to 24 V DC
AV-SNS-G14-PNP	G1/4	PNP	−100 to 0 kPa	12 to 24 V DC
AV-SNS-G14-NPN	G1/4	NPN	−100 to 0 kPa	12 to 24 V DC
AV-SNS-G14-Analog	G1/4	Analog	−100 to 0 kPa	12 to 24 V DC

FLEXOR FLX

STANDALONE SPRING COMPENSATOR, ADD STROKE TO ANY CUP MOUNT, LEVEL COMPENSATOR

A standalone spring compensator that adds soft touchdown and stroke to any gripper mount.

APPLICATIONS

retrofit compensation, height variation, gentle contact

10 to 50
STROKE, MM

3
THREADS

Range and specifications (12 order codes)

Order code	Thread	Stroke	Spring
AV-FLX-M05-S10	M5	10 mm / 0.394 in	Stainless
AV-FLX-M05-S20	M5	20 mm / 0.787 in	Stainless
AV-FLX-M05-S30	M5	30 mm / 1.181 in	Stainless
AV-FLX-M05-S50	M5	50 mm / 1.969 in	Stainless
AV-FLX-G18-S10	G1/8	10 mm / 0.394 in	Stainless
AV-FLX-G18-S20	G1/8	20 mm / 0.787 in	Stainless
AV-FLX-G18-S30	G1/8	30 mm / 1.181 in	Stainless
AV-FLX-G18-S50	G1/8	50 mm / 1.969 in	Stainless
AV-FLX-G14-S10	G1/4	10 mm / 0.394 in	Stainless
AV-FLX-G14-S20	G1/4	20 mm / 0.787 in	Stainless
AV-FLX-G14-S30	G1/4	30 mm / 1.181 in	Stainless
AV-FLX-G14-S50	G1/4	50 mm / 1.969 in	Stainless

LINK LNK

THREAD ADAPTERS, CONNECT ANY CUP TO ANY PORT, ADAPTER FITTING

Thread adapters that let any gripster meet any port, so mixed thread systems plumb together without special parts.

APPLICATIONS

mixed thread systems, retrofits, manifold plumbing

13

ADAPTER COMBINATIONS

Range and specifications (13 order codes)

Order code	Male thread	Female thread	Body
AV-LNK-M05-G18	M5	G1/8	Hex stainless steel
AV-LNK-M05-G14	M5	G1/4	Hex stainless steel
AV-LNK-M05-G38	M5	G3/8	Hex stainless steel
AV-LNK-M05-G12	M5	G1/2	Hex stainless steel
AV-LNK-G18-G14	G1/8	G1/4	Hex stainless steel
AV-LNK-G18-G38	G1/8	G3/8	Hex stainless steel
AV-LNK-G18-G12	G1/8	G1/2	Hex stainless steel
AV-LNK-G14-G18	G1/4	G1/8	Hex stainless steel
AV-LNK-G14-G38	G1/4	G3/8	Hex stainless steel
AV-LNK-G14-G12	G1/4	G1/2	Hex stainless steel
AV-LNK-G38-G18	G3/8	G1/8	Hex stainless steel
AV-LNK-G38-G14	G3/8	G1/4	Hex stainless steel
AV-LNK-G38-G12	G3/8	G1/2	Hex stainless steel